EXPRESS MAIL CERTIFICATE

Date 10/16/02 Label No. EV208552478 US

I hereby certify that, on the date indicated above, this paper or fee was deposited with the U.S. Postal Service & that it was addressed for delivery to the Assistant Commissioner for Patents, Washington, DC 20231 by "Express Mail Post Office to Addressee" service.

D Brock
Name (Print)

Signature

PLEASE CHARGE ANY DEFICIENCY UP TO $300.00 OR CREDIT ANY EXCESS IN THE FEES DUE WITH THIS DOCUMENT TO OUR DEPOSIT ACCOUNT NO. 04-0100

Customer No.: 32801

Docket No: 0630/1E791-US1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Vedrana S. SUSULIC; Emir DUZIC

Serial No.: 09/761,116 Art Unit: 1636

Confirmation No.: 3094

Filed: January 16, 2001 Examiner: Leffers Jr., Gerald

For: TRANSCRIPTIONAL REGULATION OF THE HUMAN BETA3 - ADRENERGIC RECEPTOR GENE

---

**COURTESY COPY OF CLAIMS PENDING UPON ENTRY OF ACCOMPANYING AMENDMENT**

Hon. Commissioner of
Patents and Trademarks
Washington, DC 20231

October 16, 2002

Sir:

28. (Amended) A method of screening for a compound that increases activity of an Sp1 or B segment-binding $\beta_3$-adrenergic receptor ($\beta_3$-AR) *trans*-activating factor in human cells, which method comprises:

(a) contacting cells capable of producing the Sp1 or B segment-binding $\beta_3$-AR *trans*-activating factor with a test compound; and

(b) detecting an increase in a level of activity of the Sp1 or B segment-binding $\beta_3$-AR *trans*-activating factor.

29. (Amended) A method of screening for a compound that increases activity of a $\beta_3$-adrenergic receptor ($\beta_3$-AR) *trans*-activating factor in human cells, which method comprises:

(a) contacting cells capable of producing the $\beta_3$-AR *trans*-activating factor with a test compound; and

(b) detecting an increase in a level of activity of the $\beta_3$-AR *trans*-activating factor, wherein the increase in the level of activity of the $\beta_3$-AR *trans*-activating factor is detected by detecting an increase in the level of expression of a reporter gene operatively associated with an isolated nucleic acid having a nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1) relative to a level of expression prior to contact with the test compound.

30. (Amended) A method according to claim 28, wherein the increase in the level of activity of the $\beta_3$-AR *trans*-activating factor is detected by detecting an increase in the amount of $\beta_3$-AR *trans*-activating factor present in the cells after contacting them with the test compound relative to the amount present prior to contact with the test compound.

31. A method according to claim 28, wherein the cells do not endogenously express, or express at very low level, $\beta_3$-AR.

32. A method according to claim 31, wherein the cells are selected from the group consisting of HeLa cells, CV-1cells, and WAT cells.

33. (Amended) A method of screening for a compound that inhibits activity of an Sp1 or B segment-binding $\beta_3$-adrenergic receptor ($\beta_3$-AR) *trans*-activating factor in human cells, which method comprises:

(a) contacting cells capable of producing the Sp1 or B segment-binding $\beta_3$-AR *trans*-activating factor with a test compound; and

(b) detecting a decrease in a level of activity of the Sp1 or B segment-binding $\beta_3$-AR *trans*-activating factor.

34. (Amended) A method of screening for a compound that inhibits activity of a $\beta_3$-adrenergic receptor ($\beta_3$-AR) *trans*-activating factor in human cells, which method comprises:

(a) contacting cells capable of producing the $\beta_3$-AR *trans*-activating factor with a test compound; and

(b) detecting a decrease in a level of activity of the $\beta_3$-AR *trans*-activating factor,

wherein the decrease in the level of activity of the $\beta_3$-AR *trans*-activating factor is detected by detecting a decrease in the level of expression of a reporter gene operatively associated with an isolated nucleic acid having a nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1) relative to a level of expression prior to contact with the test compound.

35. A method according to claim 33, wherein the decrease in the level of activity of the $\beta_3$-AR trans-activating factor is detected by detecting a decrease in the amount of $\beta_3$-AR trans-activating factor present in the cells after contacting them with the test compound relative to the amount present prior to contact with the test compound.

36. A method according to claim 33, wherein the cells endogenously express $\beta_3$-AR.

37. A method according to claim 36, wherein the cells are selected from the group consisting of neuroblastoma and BAT cells.

38. (New). A method of screening for a compound that increases activity of a $\beta_3$-adrenergic receptor ($\beta_3$-AR) *trans*-activating factor in human cells, which method comprises:

(a) contacting cells capable of producing the $\beta_3$-AR *trans*-activating factor with a test compound; and

(b) detecting an increase in a level of activity of the $\beta_3$-AR *trans*-activating factor,

wherein the level of activity of the $\beta_3$-AR *trans*-activating factor is detected by an increase in the level of expression of a reporter gene operatively associated with an isolated nucleic acid selected from the group consisting of:

(i) about a 7 kb genomic DNA 5' flanking region of a $\beta_3$-AR transcription start site,

(ii) a deletion construct of a 7 kb genomic DNA located upstream of a $\beta_3$-AR transcription start site;

(iii) a nucleic acid wherein the sequence that is greater than 80% identical to the nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1) is located 5' to the Sp-1 binding site relative to a transcription start site; and

(iv) a nucleic acid comprising a heterologous coding sequence

operatively associated with a promoter and operatively associated with the nucleotide sequence that is greater than 80% identical to the nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1) in proximity to the Sp-1 binding site, whereby expression of the heterologous protein is regulated in a tissue specific manner.

39. (New) A method of screening for a compound that decreases activity of a $\beta_3$-adrenergic receptor ($\beta_3$-AR) *trans*-activating factor in human cells, which method comprises:

(a) contacting cells capable of producing the $\beta_3$-AR *trans*-activating factor with a test compound; and

(b) detecting an decrease in a level of activity of the $\beta_3$-AR *trans*-activating factor,

wherein the level of activity of the $\beta_3$-AR *trans*-activating factor is detected by an decrease in the level of expression of a reporter gene operatively associated with an isolated nucleic acid selected from the group consisting of:

(i) about a 7 kb genomic DNA 5' flanking region of a $\beta_3$-AR transcription start site,

(ii) a deletion construct of a 7 kb genomic DNA located upstream of a $\beta_3$-AR transcription start site;

(iii) a nucleic acid wherein the sequence that is greater than 80%

identical to the nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1) is located 5' to the Sp-1 binding site relative to a transcription start site; and

(iv) a nucleic acid comprising a heterologous coding sequence operatively associated with a promoter and operatively associated with the nucleotide sequence that is greater than 80% identical to the nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1) in proximity to the Sp-1 binding site, whereby expression of the heterologous protein is regulated in a tissue specific manner.

M:\0630\1e791us1\HME0379.WPD